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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,262	07/29/2003	Anders Grunnet Jepsen	ITL.1012US (P16648)	6692
21906	7590	04/16/2008	EXAMINER	
TROP PRUNER & HU, PC 1616 S. VOSS ROAD, SUITE 750 HOUSTON, TX 77057-2631			RAHLL, JERRY T	
			ART UNIT	PAPER NUMBER
			2874	
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			04/16/2008	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/629,262	<b>Applicant(s)</b> JEPSEN ET AL.	
	<b>Examiner</b> JERRY T. RAHLL	<b>Art Unit</b> 2874	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 November 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments, see Applicant's Statement in Support of Pre-Appeal Brief Request for Review, filed 08 November 2007, with respect to the rejection(s) of claim(s) 1-16 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of newly discovered prior art, discussed below.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 2, 6-8, 11 and 13 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent No. 6,631,225 to Lee et al.

4. Regarding Claim 1, Lee describes a planar light wave circuit (see Figures 1-2) including a substrate (106), a pair of waveguides (102, 104) formed on the substrate, and a coupling region (L<sub>3</sub>) formed between the waveguides, where at least one of the waveguides is segmented in the coupling region (see Column 4, Lines 60-65).

5. Regarding Claim 2, Lee describes both of the waveguides as segmented in the coupling region (at 108, 110, see Column 4, Lines 60-65).

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6. Regarding Claim 6, Lee describes a method including coupling a pair of light signals (in 102, 104) in a coupling region along two planar waveguides (see Column 4 Lines 24-32), and using gaps between segments along the length of the coupling region to control the coupling of signal between the waveguides (see Column 4, Lines 33-38 and 60-65).

7. Regarding Claim 7, Lee describes forming a segmented coupling region ( $L_3$ ) between the two planar waveguides.

8. Regarding Claim 8, Lee describes segmenting both of the waveguides (see Column 4, Lines 60-65).

9. Regarding Claim 11, Lee describes an optical circuit (see Figures 1-2) including a substrate (106), a pair of waveguides (102, 104) formed on the substrate, and each of the waveguides including a segmented region (108, 110, see Column 4, Lines 60-65) including waveguide portions separated from one another by gaps to form a coupling region of each waveguide, where the coupling region of each waveguide is juxtaposed with the coupling region of the other waveguide (at  $L_3$ ).

10. Regarding Claim 13, Lee describes the circuit as a planar light wave circuit (see Figures 1-2).

### ***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**12.** Claims 3-5, 9, 10, 12, and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee as applied to claims 1, 6, and 11 above, and further in view of US Patent No. 5,577,141 to Adar et al.

**13.** Lee describes a planar light wave circuit and method of coupling light signals as discussed above with respect to Claims 1, 6, and 11. Lee does not describe the specific structure of the segmented taper. Adar describes a segmented taper wave structure (see Figures 1-2 and Columns 4-5). At the time of invention, it would have been obvious to one of ordinary skill in the art to use the segmented taper structure of device of Lee. The motivation for doing so would have been to reduce leakage losses (see Adar at Column 3 Lines 1-5).

**14.** Regarding Claims 3 and 12, Adar describes a segmented taper having at least two gaps along the length of a waveguide (see Figures 1-2).

**15.** Regarding Claims 4, 9, and 15, Adar describes the gaps as irregularly sized (see Figure 1).

**16.** Regarding Claims 5, 10, and 14, Adar describes the gaps as regularly sized (see Figure 2).

**17.** Regarding Claim 16, Adar describes the gaps arranged to improve the coupling between the waveguides (see Column 3 Lines 1-5).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JERRY T. RAHLL whose telephone number is (571)272-2356. The examiner can normally be reached on M-F (9:00-5:00).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jerry T Rahll  
/Jerry T Rahll/  
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